FIG. 1

FIG. 2

(TE) 110, 112   ISDN Modem 120

220

Data
Line 1
Line 2

ADC/DAC 221
Digital 222
Applications 223

1.430 (BRI) 225
LAPD Q.921 226
Q.931 x 25 227
End to End User Signalling 228

U Interface ISDN 192 Kbps

Protocol Converter 130

230

1.430 (BRI) 231
LAPD Q.921 232
CDMA 233
EW[X] 234
Bandwidth Management 235

CDMA Radio Link 160 X Kbps

Base Station 140

240

CDMA 241
EW·X 242
BW mgt 243
1.430 (BRI) 244
LAPD Q.921 245
Q.931 V5.2 246
Call Processing 247

PSTN 180

30 MHz
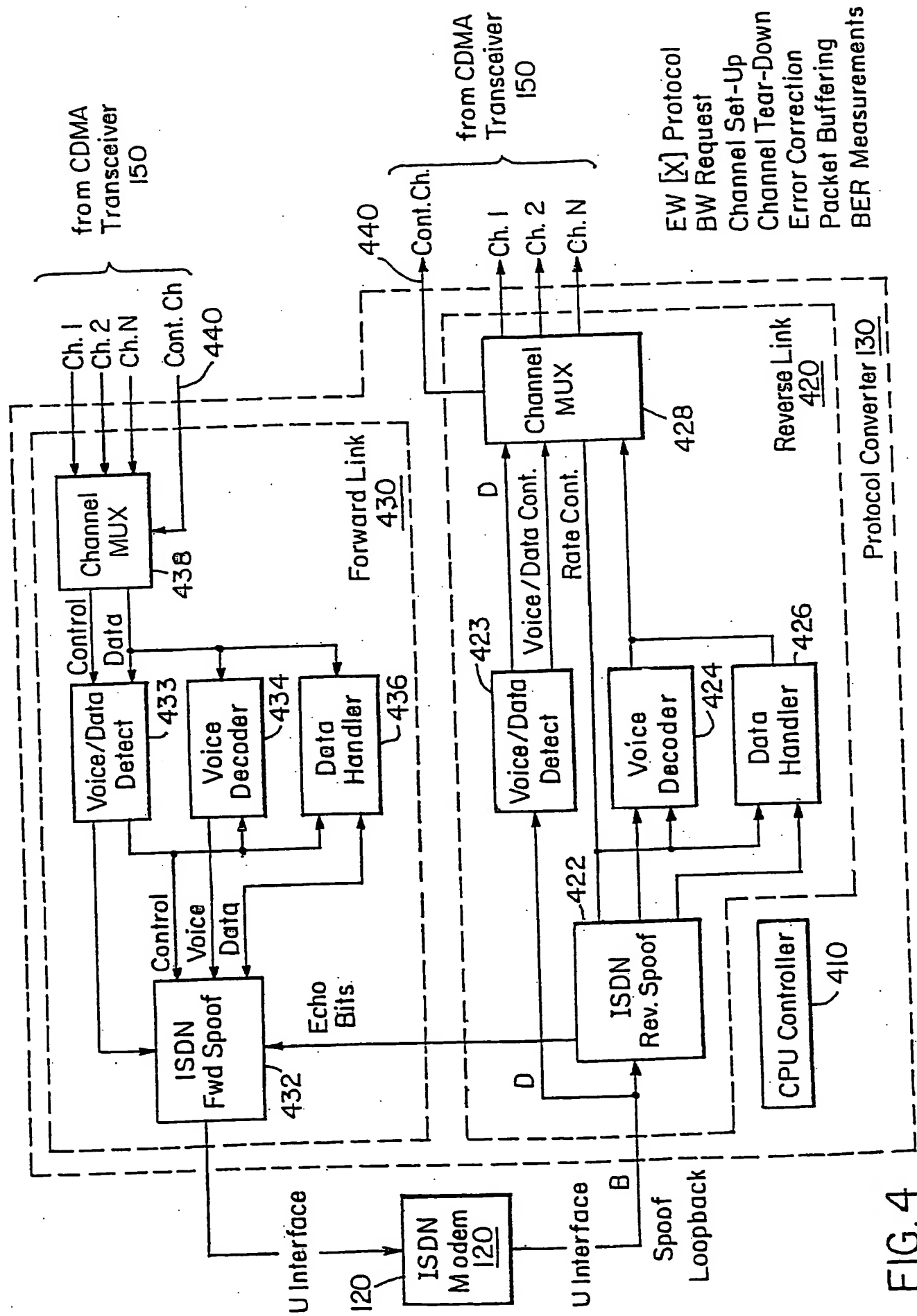
1.25 MHz (500–600 Kbps) | 1.25 MHz | loopback | 1.25 MHz

64 PN Codes at 8Kbps

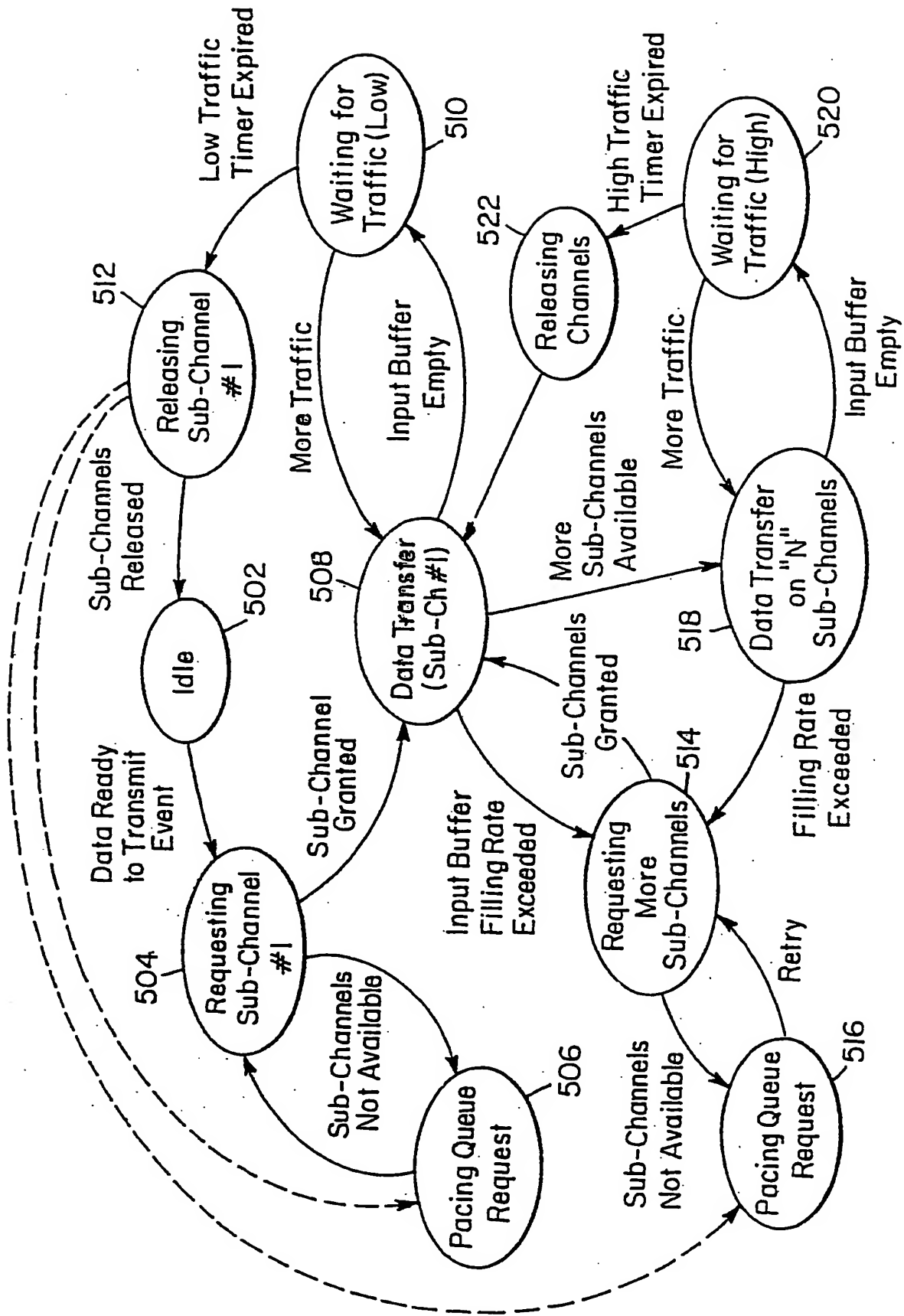0 | 1 · · · · | 63

FIG. 3

FIG. 4

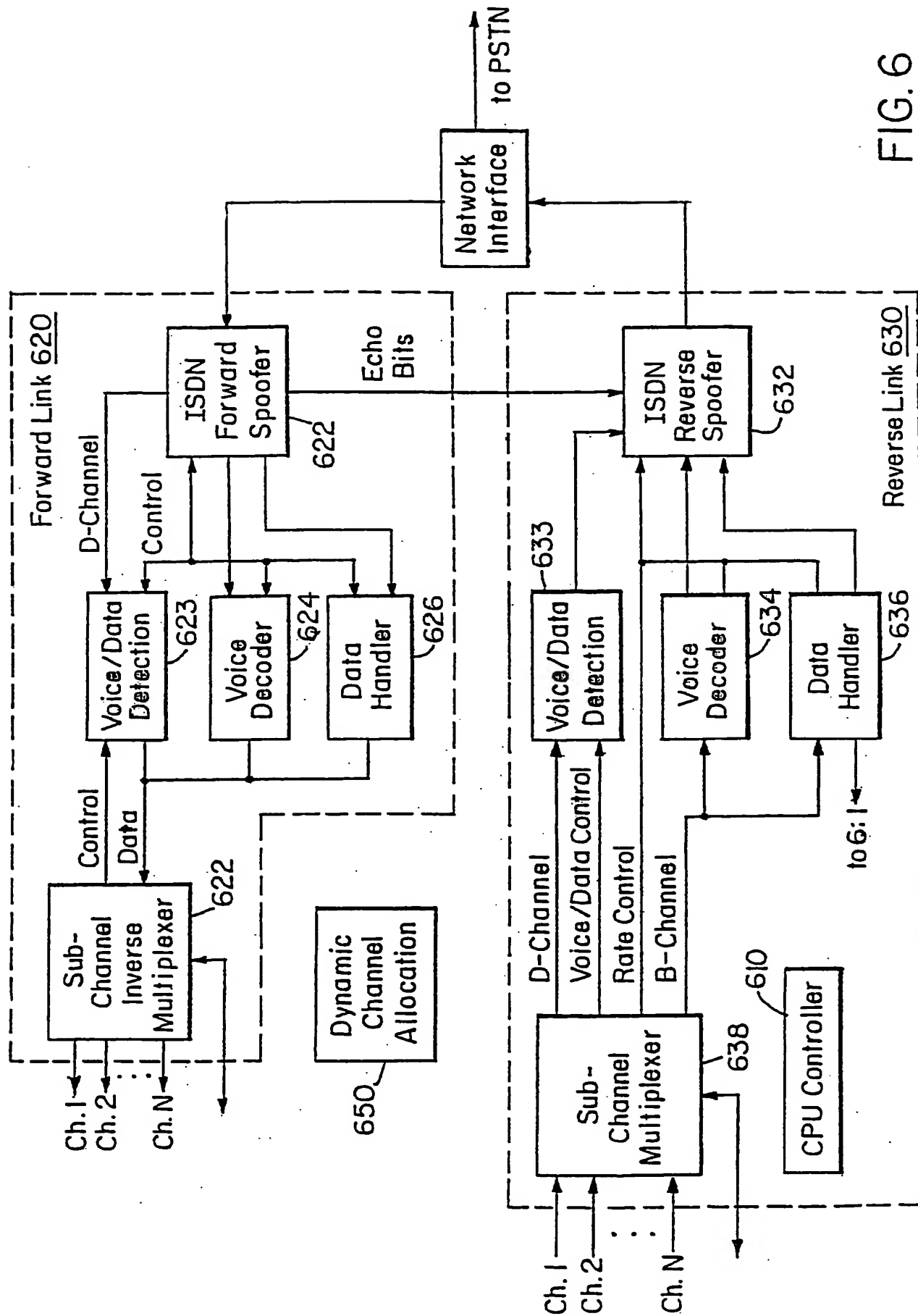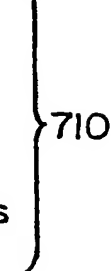FIG. 5

FIG.6
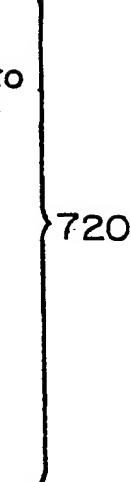
MAIN:
    DO Always
        Process Port Request
        Process Bandwidth Release
        Process Bandwidth Requests   } 710
        Locate and tear down unused sub-channels
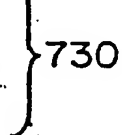   ENDDO

PORT REQUEST:
    Make reservation in least utilized sub-band
        Reservation decision based on % of available Sub-Channels to
        assign (Based on parallel user BW vs. throughput efficiency)
    IF reservation was made
        Send frequency and code assignment
        Update allocations   } 720
    ELSE
        Add port request to port queue
        Calculate expected wait time
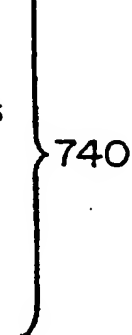   Send wait message to user
    ENDIF

BANDWIDTH RELEASE:
    Notify channel-bonding function
    Return frequency and code to available pool   } 730
    Update radio record

BANDWIDTH REQUEST:
    Select highest priority with lowest bandwidth utilization,
        including need-allocation gap
    Check other sub-bands for greatest available sub channels
        (Switch sub-bands if difference in sub-band space   } 740
        exceeds payback threshold)
    Assign sub channels based on need, priority, availability
    Notify channel bonding function
    Update radio record

FIG. 7